

Dermaptera from Ceylon

by

A. BRINDLE

ABSTRACT

An account is given of the Dermaptera collected by the 1970 expedition to Ceylon, organised by the Muséum d'Histoire Naturelle, Geneva. 184 specimens of 17 species are listed, and one new species, *Nannisolabis ceylonicus*, is described. The species named as *Nannisolabis philetas* (BURR) and *Euborellia kudagae* (BURR) in BRINDLE (1971) are now known to refer to *N. ceylonicus* and a new species of *Euborellia* respectively. The distribution of the species in Ceylon and their World distribution is given, and a key is included to the known Ceylon species of the Brachylabiinae (Carcinophoridae).

Through the kindness of Dr. BERND HAUSER, of the Museum d'Histoire Naturelle, Geneva, I have been able to study a collection of 184 specimens of Dermaptera taken during an expedition organised by the Museum during January and February 1970. All the specimens, except the single specimen of *Chelisoches morio* (FABRICIUS) were taken by Dr. C. BESUCHET and Dr. I. LÖBL, mainly by sieving, or other techniques designed to collect smaller insects from debris, etc. A list of numbered localities has been available, and the number in brackets after each item in the present paper refers to the number of the particular locality.

17 named species are included, of which one is new and is described, whilst another two, represented only by one immature and one female, are named to genus only. Out of the 17 species, 8 are endemic, and of the 184 specimens, 38 are of endemic species. This high proportion of endemics indicates how different collecting techniques can bring to notice hitherto unknown species or species which are thought to be rare.

The endemic species of Ceylon, numbering 23 out of the present recorded total number of 48, are mainly rare or uncommon, and are apparently concentrated in the Central province or in the neighbouring provinces. 16 endemic species are recorded from the Central province; 10 in the North-Western, mainly towards the south-east; 6 in Sabaragamuwa; and 5 each in the Western and Southern provinces. None are recorded from the Eastern or the Southern provinces. In the present material all the 8 endemic species represented have been taken in the Central province, with one also taken in the North-Western province. It seems likely that most of the endemic species form a diminishing group now restricted to the forests in the central mountainous area of Ceylon. The commonest species in the present material is *Gonolabis electa* BURR, which is the

most frequent and widely distributed species of the island, and *Nala lividipes* (DUFOR) is also well represented.

A number of new provincial records are listed in the present paper and the known distribution of the species, both on a World basis and their distribution in Ceylon, is given. The distribution is from BRINDLE (1971) (1975) modified by the present records.

The study of the collection has shown that two species named in the Ceylon list in BRINDLE (1971) were mis-identified. The species named as *Nannisolabis philetas* (BURR) is now known to refer to *N. ceylonicus* sp. n., after a comparison of the types of both species, and the present specimen of *N. philetas*, although immature, corresponds reasonably well with the type of this species. The species named as *Euborellia kudagae* (BURR) is now known to refer to a new species of *Euborellia*. There has been some confusion about the identity of *kudagae*, which has now been resolved (BRINDLE, in press), and *Anisolabis kudagae* BURR is the correct name. The present specimen of this species has been compared externally and by the male genitalia to the syntype male of *kudagae* in the British Museum (Natural History).

The specimens recorded in the present paper are in the Museum d'Histoire Naturelle, Geneva, except for some duplicate specimens retained in the Manchester Museum (MM) and a few paratypes which have also been retained in this Museum, or in the British Museum (Natural History) (BMNH), and these are noted in the text.

I am indebted to Dr. BERND HAUSER, of the Museum d'Histoire Naturelle, for the opportunity to study the collection, and also to Dr. D. R. RAGGE and Mrs. J. A. MARSHALL, of the British Museum (Natural History) for permission to examine the types referred to above.

PYGIDICRANIDAE

ECHINOSOMATINAE

Echinosoma parvulum DOHRN

Echinosoma parvulum DOHRN, 1863, *Stettin. ent. Ztg.* **24**: 66.

UVA: Inginiyagala, 12.II.1970, under tree bark, 1 ♂ (63a).

Distribution: South India, and Ceylon, where it is recorded from all provinces except the South and North provinces.

CARCINOPHORIDAE

CARCINOPHORINAE

Gonolabis electa BURR

Gonolabis electa BURR, 1910, *F. Brit. India., Derm.*: 79.

WESTERN: Yakkala, 14.I.1970, cultivated area, 1 ♂, 1 ♀, 3 larvae (1).

SABARAGAMUWA: Kegalla, 14.I.1970, in wooded ravine partially planted with bananas, 1 ♀, 12 larvae (2); 8 miles west of Kalawana, 20.I.1970, valley recently deforested, under ferns, 2 ♂, 2 larvae (13); 2 miles east of Kalawana, 20.I.1970, cultivated area, 2 ♂, 2 ♀, 2 larvae (15).

CENTRAL: Kandy, 15.I.1970, 600 m., forest near guesthouse, 2 ♀, 6 larvae (3c); under bark, 1 ♂, 1 ♀ (3b); Udawattekele Sanctuary, 19.I.1970, old forest, 2 ♂, 2 ♀ (11); 22.I.1970, edge of forest, 3 ♂, 2 larvae (18); Matale, 17.I.1970, 400 m, wooded ravine, 5 ♂, 10 ♀ 5 larvae (7); Mulhulla, 750 m., 27.I.1970, forest, 1 ♂, 2 ♀, 4 larvae (29); Mulhulla, under bark, 1 ♂, 1 ♀ (45a); Mahaweli Ganga, 10.II.1970, vegetable debris amongst reeds by river bank, 1 ♂ (57b).

UVA: Diyaluma Falls, 23.I.1970, 400 m., in dead leaves, 3 ♂, 1 ♀ (21); forest, 2 ♀, 2 larvae (63c); 6 miles north of Monaragala, 13.II.1970, forest, 2 ♂, 2 ♀ (64).

Distribution: Oriental Region, including South India, and Ceylon, where it is recorded from all provinces except the North and North-Central. Its apparent absence in these provinces is surprising in view of its distribution in South India.

Epilandex burri (BORELLI)

Landex burri BORELLI, 1921, *Bull. Mus. natn. Hist. nat. Paris*, 1921: 81.

Epilandex burri (BORELLI): HEBARD, 1927, *Proc. Acad. nat. Sci. Philad.* 79: 27.

SABARAGAMUWA: 8 miles west of Kalawana, 20.I.1970, valley recently reforested, amongst ferns, 1 ♂ (13).

CENTRAL: Kandy, 22.I.1970, 600 m., Udawattekele Sanctuary, on edge of forest, 1 ♂, 2 ♀ (18); Mulhulla, under bark, 4.II.1970, 1 ♀ (45a).

Distribution: Thailand and Ceylon. Only previously recorded from the Western, South, Central, and Sabaragamuwa provinces.

Anisolabis greeni BURR

Anisolabis greeni BURR, *Ann. mag. nat. Hist.* (7) 4: 257.

CENTRAL: Peradeniya, 19.I.1970, 550 m., in forest near Agricultural Experimental Station, 2 ♂, 1 ♀ (10).

Distribution: Ceylon (endemic); originally described from the North-western province, it is now also known from Uva, Central, and North-central provinces. Uncommon.

Anisolabis kudagae BURR

Anisolabis kudagae BURR, 1901, *J. Bombay nat. Hist. Soc.* 14: 320.

CENTRAL: Hakgala, 28.I.1970, in old forest above the Botanic Gardens, 1800 m., 1 ♂ (30c).

Distribution: Ceylon (endemic). Only certainly known from Hatton and Hakgala. This species was named as *Euborellia kudagae* in Brindle (1971) but the specimens concerned prove to be a new species of *Euborellia*. The present male has been compared, externally and by male genitalia, to the syntype male of *kudagae* in the British Museum (Natural History). Although Burr (1910) records *kudagae* from other localities, these need checking, since the male recorded from Maskelyia is being described as a new species of *Anisolabis*, and the male genitalia figured as *kudagae* in Burr (1915) refers to this new species and not to *kudagae*.

Anisolabis sp.

NORTH-CENTRAL: Medawachchiya, captured at night, 6.II.1970, 1 immature (51a).

This is a dark brown species, with a red head and with the posterior part of the mesonotum, and all the metanotum and first abdominal tergite yellowish; legs yellow, femora with blackish bands. It cannot easily be referred to any of the known Ceylon species, although the paler colouration may be partly due to immaturity.

Euborellia stali (DOHRN)

Forcinella stali DOHRN, 1864, *Stettin. ent. Ztg.* **25**: 286.

Euborellia stali (DOHRN): BURR, 1911, *Genera Insectorum* **122**: 31.

NORTH-WESTERN: Rajakadaluwa, 31.I.1970, in coconut plantation, 1 ♀ (3b).

Distribution: Almost cosmopolitan. In Ceylon recorded from all provinces except Sabaragamuwa.

BRACHYLABIINAE

Nannisolabis philetas (BURR)

Brachylabis philetas BURR, 1901, *J. Bombay nat. Hist. Soc.* **14**: 322.

Nannisolabis philetas (BURR): BURR, 1910, *F. Brit. India, Derm.*: 106.

CENTRAL: Hatton, 9.II.1970, 1400 m., wooded mountain east of Hatton, in forest, 1 ♀ (55a).

Distribution: Ceylon (endemic). Previously only recorded from the North-Western province. Brindle (1971) records this species from Sabaragamuwa, but these specimens really are conspecific with the new species, *N. ceylonicus*, described below.

Nannisolabis willeyi BURR

Nannisolabis willeyi BURR, 1910, *F. Brit. India, Derm.*: 107.

CENTRAL: Kandy, 19.I.1970, 600 m., Udawattekele Sanctuary, in old forest, 1 immature (11).

Distribution: Ceylon (endemic). Only recorded from the Central province. Rare.

Nannisolabis ceylonicus sp. n.

Blackish; antennae dark brown; legs yellow, femora dark brown except for apex (first pair), apical fifth (second pair), and apical fourth (posterior pair), tibiae vaguely darkened. Cuticle of head granulate, of thorax and abdomen very strongly and deeply punctured, the punctures large and close together, tending to coalesce; abdominal tergites with bases less strongly punctured, and extreme distal margins impunctate. Almost glabrous anteriorly, abdomen with depressed yellow hairs, and with longer dark stiff hairs.

Male (fig. 1): head tumid, eyes fairly small; antennal segments broad, distal segments broader than basal segments (fig. 3), antennae 10-segmented, and proportions of segments as figured. Pronotum transverse, sides straight and parallel, posterior margin almost

straight; mesonotum transverse, sides angled and anterior half strongly depressed, with a curved ridge separating the depressed anterior half from the raised posterior half; no lateral longitudinal ridges. Metanotum transverse, swollen laterally. Legs long. Abdomen fusiform, lateral tubercles on third and fourth tergites small; a flattened smooth oval area occurs on segment 5 towards each lateral margin, immediately posterior to the tubercles on the fourth tergite. Posterior margin of penultimate sternite rounded with a small excision medially. Each branch of forceps short, evenly tapered from base, apex incurved, inner margin with small crenulations. Genitalia with pointed parameres, virga slender (fig. 2). Length of body 5.5 mm, forceps .5 mm.

Female: similar to male, forceps slightly more slender. Length of body 5.5 mm., forceps .5 mm.

Holotype ♂, Ceylon, CENTRAL: Kandy, env. 600 m., 19.I.1970 (11). Paratypes, same data, 12 ♂, 3 ♀ (22); Mulhulla, 4.II.1970, 4 ♂, 1 ♀. Also 2 ♂, 2 ♀ paratypes retained (MM) and 2 ♂, 1 ♀ paratypes (BMNH).

The ten specimens of this species (named as *N. philetas* in Brindle, 1971) in the Lund University Expedition collection are from Sabaragamuwa province.

Ctenisolabis sp.

CENTRAL: Mulhulla, 4.II.1970, 1 ♀, 1 immature (45).

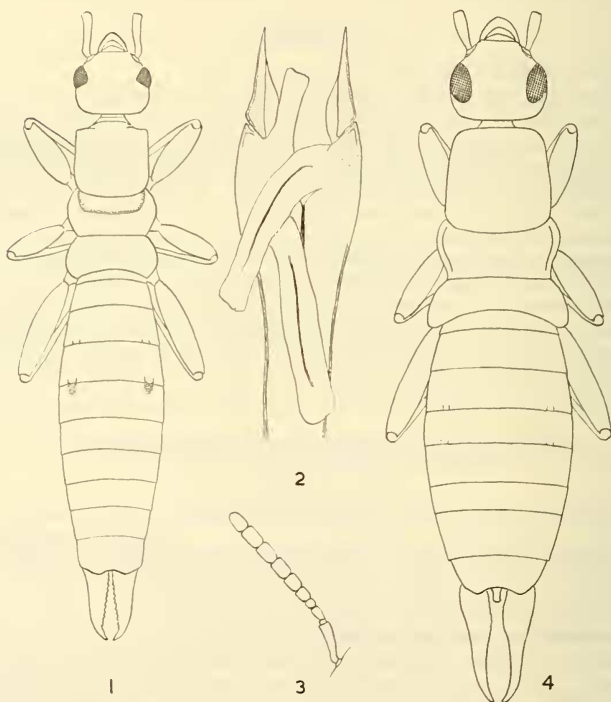
The female (fig. 4) is black; distal antennal segments dark brown, bases of each segment pale; legs yellowish, basal two-thirds of femora black; forceps dark reddish-brown. Cuticle dull, sparsely pubescent, pubescence pale and depressed; anterior part of insect granulose, posterior abdominal segments punctured, somewhat rugosely towards the base of the segments. Mesonotum with a slight median longitudinal depression, and with a strong but obtuse lateral ridge at each side; lateral tubercles on third and fourth tergites small.

This is quite distinct from *Ctenisolabis fletcheri* Burr but a few other female specimens of this genus from Ceylon are available and seem to represent distinct species. The differences however, are small, and may not be constant, so that examinations of male genitalia are most desirable when males are available. It seems therefore unsatisfactory in this particular group to base a species on females, even though the Brachylabiinae often have distinctive external characters.

KEY TO BRACHYLABIINAE (CARCINOPHORIDAE) NOW RECORDED FROM CEYLON

1. Small species, body length 4 mm., or so; at least elytra fully developed
 *Geracodes brincki* BRINDLE
- Larger species, body length 5.5 mm or more; elytra and wings completely
 absent 2
2. Eyes larger than length of head behind eyes (fig. 4) 3
- Eyes smaller than length of head behind eyes (fig. 1). 4
3. Cuticle of pronotum punctured; puncturation of abdomen strong; dark
 reddish-brown in colour, antennae blackish or dark brown; larger species,
 body length 9-14 mm *Ctenisolabis fletcheri* BURR
- Cuticle of pronotum granulose; puncturation of abdomen weak; blackish
 in colour, antennae black; smaller species, body length 6-7 mm . . . *Ctenisolabis* sp.

4. Head and pronotum impunctate or almost so; pronotum longer than broad, widened posteriorly; body length 9-10 mm *Nannisolabis willeyi* BURR
- Head and pronotum punctured; pronotum as broad as long or transverse, parallel-sided or only slightly widened posteriorly 5
5. Much less strongly punctured, the punctures smaller and separated by about their own diameter; pronotum slightly widened posteriorly, as broad as long; antennal segments 9 and/or 10 white, rest dark; mesonotal transverse ridge shallow; general colour dark reddish-brown, femora vaguely darker; larger, body length 7 mm *Nannisolabis philetas* (BURR)
- Much more strongly punctured, the punctures large, deep and adjacent, tending to coalesce with each other; pronotum parallel-sided, transverse; antennal segments unicolorous; mesonotal transverse ridge deep; general colour blackish, femora strongly darkened; smaller, body length 5.5 mm *Nannisolabis ceylonicus* sp. n.



FIGS. 1-3. *Nannisolabis ceylonicus* sp. n. 1, male, dorsal—2, male genitalia—3, antenna.
FIG. 4. *Ctenisolabis* sp., female.

LABIDURIDAE

Nala lividipes (DUFOUR)

Forficula lividipes DUFOUR, 1829, *Annls. Sci. nat.* **13**: 340.

Nala lividipes (DUFOUR): BURR, 1911, *Genera Insectorum* **122**: 35.

WESTERN: Yakkala, 14.I.1970, cultivated area, 1 ♀ (1).

CENTRAL: Kandy, 15.I.1970, 600 m., 8 ♂, ♀ (3c); 19.I.1970, Udawattekele Sanctuary, in old forest, 12 ♂, ♀ (11); Mulhulla, 27.I.1970, 750 m., in forest, 2 ♀ (29); 4.II.1970, beneath bark, 2 ♀ (45a).

UVA: Diyaluma Falls, 25.I.1970, 450 m., 4 ♂ (26); Inginiyagala, 12.II.1970, at night in resthouse, 5 ♂ (63b).

NORTHERN: 2 miles north-east of Puliyan Kulam, 6.II.1970, under bark, 1 ♀ (48); Mullaattivu, 6.II.1970, forest 4-5 miles south west of village, 1 ♀ (50b).

NORTH-CENTRAL: Medawachchiya, in forest 2 miles north, 6.II.1970, 1 ♀ (51b).

SABARAGAMUWA: Kuruwita, 21.I.1970, on road to Bopath Ella Falls, at base of large banyan, 2 ♀ (17).

SOUTHERN: Tissamaharama, 23.I.1970, at night in resthouse, 1 ♀ (22).

Distribution: South Europe, Ethiopian, Oriental, and Australasian Regions. Recorded from all provinces in Ceylon.

LABIIDAE

LABIINAE

Labia curvicauda (MOTSCHULSKY)

Forficesila curvicauda MOTSCHULSKY, 1863, *Bull. Soc. nat. Moscou* **36**: 2.

Labia curvicauda (MOTSCHULSKY): BURR, 1911, *Genera Insectorum* **122**: 56.

CENTRAL: Kandy, 15.I.1970, 600 m., forest near guesthouse, under bark, 1 ♂, 2 ♀ (3b).

Distribution: Almost cosmopolitan. In Ceylon recorded from all provinces and particularly common in the west and north-west.

Chaetospania thoracica (DOHRN)

Platylabia thoracica DOHRN, 1867, *Stettin. ent. Ztg.* **28**: 348.

Chaetospania thoracica (DOHRN): BURR, 1911, *Genera Insectorum* **122**: 54.

CENTRAL: Kandy, 15.I.1970, 600 m., in forest near guesthouse, under bark, 1 ♂, 1 ♀ (3b).

Distribution: Oriental Region. In Ceylon recorded from all provinces except Sabaragamuwa and North-Central.

Chaetospania anderssoni BRINDLE

Chaetospania anderssoni BRINDLE, 1971, *Ent. scand. Suppl.* 1: 227.

CENTRAL: Kandy, 15.I.1970, in forest near guesthouse, under bark, 1 ♀ (3b).

NORTH-WESTERN: Rajakadaluwa, 31.I.1970, in coconut plantation, 1 ♀ (36).

Distribution: Ceylon (endemic). Previously recorded from the Western and Central Provinces.

SPONGIPHORINAE

Spongovostox mucronatus (STAL)

Forficula mucronata STAL, 1860, *Kongl. Svenska Freg. Eugenie's Resa* 1: 303.

Spongovostox mucronatus (STAL): BRINDLE, 1971, *Ent. scand. Suppl.* 1: 228.

CENTRAL: Mulhulla, 4.II.1970, under bark, 1 ♀ (45).

Distribution: Oriental and Australasian Regions. Recorded in Ceylon from all provinces except South, East, North-Central, and North.

CHELISOCHIDAE

Chelisoches morio (FABRICIUS)

Forficula morio FABRICIUS, 1775, *Syst. Ent.*: 270.

Chelisoches morio (FABRICIUS): BURR, 1911, *Genera Insectorum* 122: 65.

CENTRAL: Gannuruwa, Peradeniya, 23.I.1970, 1 ♀ (P. Strinati and V. Aellen).

Distribution: Mainly Australasian and Pacific, tending to be adventive further west, as it seems to be in Ceylon. Recorded previously from the South and West Provinces, and is uncommon.

FORFICULIDAE

OPISTHOCOSMIINAE

Obelura tamul (BURR)

Neolobophora tamul BURR, 1901, *J. Bombay nat. Hist. Soc.* 14: 67.

Obelura tamul (BURR): BURR, 1911, *Genera Insectorum* 122: 96.

CENTRAL: Hakgala, 28.I.1970, 1700-1800 m., in wooded ravine north east of mountain, 1 ♂ (30a).

Distribution: Ceylon (endemic). Restricted to the Central province, and rare.

***Cordax ceylonicus* (MOTSCHULSKY)**

Labia ceylonica MOTSCHULSKY, 1863, *Bull. Soc. nat. Moscou* 36: 4.

Cordax ceylonicus (MOTSCHULSKY): BURR, 1911, *Genera Insectorum* 122: 95.

CENTRAL: Mahaweli Ganga, 7 miles from Kandy, 30.I.1970, 450 m., on wet sand by river bank, 1 ♂ (34); Hatton, 9.II.1970, wooded mountain east, in forest, 1 ♂ (55a).

Distribution: Ceylon (endemic). Not common; recorded from Western, North-Western, Sabaragamuwa, and Central provinces.

REFERENCES

- BRINDLE, A. 1971. The Dermaptera of Ceylon (Report No. 10 from the Lund University Ceylon Expedition in 1962). *Ent. scand. Suppl.*
- 1975. Dermaptera from Ceylon (Sri Lanka). *Entomologist's mon. mag.* 110: 147-151.
- in press. The identity of *Anisolabis kudagae* Burr (Dermaptera: Carcinophoridae) and a description of a new species of *Anisolabis* from Sri Lanka. *Ent. Rec.*
- BURR, M. 1910. *Fauna of British India (Dermaptera)*. 217 pp. London.
- 1915. The male genital armature of the Dermaptera, Part 2. *J. R. micr. Soc.* 1915: 521-546.

Author's address:

University Museum
Department of Entomology
Manchester M13 9PL/GB
